

WHAT IS CLAIMED IS:

1. A heat developing apparatus in which a heat developing sheet on which a latent image is formed by the exposure, and is heated to the developing temperature through a preliminary heating means, characterized in that:

the preliminary heating means has a plurality of rotating body pairs for nipping the heat developing sheet and for heating-conveying it to the developing temperature; and

the rotating body pairs are arranged so that the conveying direction of the heat developing sheet is changed by at least one pair of rotating body pair in the plurality of rotating body pairs.

2. A heat developing apparatus in which a heat developing sheet on which a latent image is formed by the exposure and is heated to the developing temperature through a preliminary heating means, characterized in that:

the preliminary heating means has a plurality of rotating body pairs for nipping the heat developing sheet and for heating-conveying it to the developing temperature;

the rotating body pairs are arranged so that the conveying direction of the heat developing sheet is changed by at least one pair of rotating body pair in the plurality of rotating body pairs; and

after the heat developing sheet is brought into contact with the rotating body from the tangential line direction of

a point on an outer periphery of one rotating body constituting the rotating body pairs, the heat developing sheet is nipped.

3. A heat developing apparatus according to Claims 1 or  
5 2, wherein

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10 respective changes of the conveying direction of the heat developing sheet at the plurality of rotating body pairs are the same rotating direction around the axial center of one rotating body which is respectively arranged in the same manner in the respective rotating body pairs.

4. A heat developing apparatus according to Claims 1 or 2, wherein

15 each of the plurality of rotating body pairs are structured by two rollers, and at least one roller is a heating roller in which the heating means is provided; and

20 arrangement, interval and temperature of the heating roller are set so as to have the temperature difference by which the heat developing processing quality deterioration due to the heat deformation of the heat developing sheet is not generated.

5. A heat developing apparatus according to Claim 4, wherein the heating roller comprises a thick-wall metallic pipe, heat source portion arranged on the axis center of the metallic  
25 pipe, and

a plurality of members whose heat conductivity is greater

than the metallic pipe, are buried at an equal interval in the peripheral direction of the wall thickness portion of the metallic pipe.

5           6. A heat developing apparatus according to claims 1 or 2, wherein

10           the rotating body surface material of the plurality of rotating body pairs which is brought into contact with the surface on which a material forming a latent image of the heat developing sheet is coated, is formed of silicon rubber, and

15           the heat developing sheet is deformed and conveyed in the same rotation direction as the rotation body around the axis center of the rotating body structuring the surface by the silicon rubber.

20           7. A heat developing apparatus according to Claims 1 or 2, wherein

          the rotating body pair nips the heat developing sheet by the self weight load of the rotating body, and the rotating body arranged above the rotating body pair can be moved in the surface direction in which the axis centers of the rotating body pairs are connected.